IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	
Livshits et al.	Art Unit: 1656
Application No.: 09/466,935	Examiner: David J. STEADMAN
Filing Date: December 20, 1999	Attorney Ref. No.: US-126O
For: NOVEL GENE AND METHOD FOR PRODUCING L-AMINO ACIDS	Confirmation No.: 1750

PRE-APPEAL BRIEF CONFERENCE REQUEST

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Sir:

In response to the Final Office Action dated April 16, 2007, the response period extending through September 16, 2007 by a two-month petition for extension of time and Notice of Appeal filed herewith, Applicant requests a Pre-Appeal Brief Review in accordance with the guidelines set forth in the July 12, 2005 Official Gazette Notice. Reconsideration of this application by a three-Examiner panel is requested in view of the following remarks which identify the errors in facts, and the omission of essential elements required to establish a *prima facie* rejection.

Summary of Final Office Action and Status of Case

In the April 16, 2007 Final Office Action, claims 77-84 were rejected under 35 U.S.C. §102 for allegedly being anticipated by Kobayashi et al. ("Kobayashi") as evidenced by Zakataeva et al. and Kruse et al.. The claims are newly rejected in the Office Action under 35 U.S.C. §103 over Kobayashi in view of Georgiou et al. ("Georgiou") as evidenced by Zakataeva et al.. and Kruse et al..

The claims currently pending in this application are claims 77-84, which have all been rejected. Claims 1-76 have been cancelled without prejudice. Claim 77 is

independent.

Summary of Claimed Invention

The claimed invention is directed to a method of producing an L-amino acid comprising the following 3 steps: A) cultivating in a culture medium a bacterium transformed with a DNA that encodes a protein comprising the amino acid sequence of SEQ ID NO: 4, B) removing solids including cells from the medium, and C) purifying said L-amino acid from the medium obtained in step B).

Factual Errors Requiring Review

In the Office Action, beginning at page 2, Claims 77-84 were rejected under 35 U.S.C. § 102 for allegedly being anticipated by Kobayashi as evidenced by Zakataeva et al. and Kruse et al. Applicants respectfully request reconsideration of this rejection in light of the following comments.

The Examiner's clear error in applying this rejection revolves around claim interpretation, and the resulting mis-application of the prior art. Kobayashi is cited for teaching an *E. coli* host cell transformed with vector pAB104, which comprises a DNA segment which includes the region between and including genes pldA and pldB (see p. 1012, figure 4 and p. 1014, figure 6). This region includes the DNA of SEQ ID NO: 3, which encodes the amino acid sequence of SEQ ID NO: 4, as demonstrated by Zakataeva et al.. Applicants have agreed with this interpretation of these references. Kruse et al. is cited to show that *E. coli* is an L-threonine-producing strain. Kobayashi et al. fails to teach the recovery or purification of an L-amino acid, nor even any indication that an L-amino acid might be present in the medium following the cultivation and centrifugation of the cultivated cells, and the evidentiary references fail to make up for this deficiency.

The claims recite a method for producing an L-amino acid via cultivation of bacterial cells. Contrary to the teachings of any of the cited references, the desired product, the L-amino acid, is purified from the supernatent, that is the medium, after subjecting the cultivated cells to centrifugation. This is explicitly stated in the claims, in that step B states that the solids, such as the cells and cellular debris, are removed from the culture medium, and step C states that the L-amino acid is purified from the medium

obtained in step B). It is undisputed that this medium is the supernatent obtained after removing the cells and cellular debris.

The Examiner asserts that the reference of Kobayashi teaches, on page 1009 in the section entitled "Enzyme Assay" at the bottom of column 1, that the strain harboring the vector as described above is cultured, and then the cells are 'spun down' and washed. The pellet, which contains the solids such as the cells and cellular debris, was further processed and the objective enzymes were further purified from the processed pellet. The medium is not used for any purpose and is likely discarded, as it is not further processed as is the pellet. There is no disclosure of recovering any substance from the medium or supernatent that remains after the 'spinning'. There is no disclosure that any substance ***could be*** isolated from the medium or supernatent. More importantly, the reference of Kobayashi fails to teach, either explicitly or implicitly, step C of claim 1, that is, the purification of the L-amino acid from the medium obtained in step B.

The Examiner has stated that "by practicing the method of Kobayashi, one of ordinary skill in the art would be "removing solids" in accordance with step B and purifying said L-amino acid" in accordance with step C simultaneously." The Examiner explains that the step of centrifuging the cells would simultaneously remove solids from the medium and purify the L-amino acid, which is in the cells, from the medium.

This interpretation of the prior art and application to the claims is a ***clear error.*** This is because the claims distinctly recite 3 manipulative steps, that is, cultivating the bacterium, removing solids including cells from the medium, and purifying the L-amino acid ***from the medium*** obtained in the second step. These are distinct steps as indicated in the claim, for example, that the L-amino acid is purified from the medium obtained in the second step. Clearly, one cannot purify the L-amino acid without first obtaining the medium in the second step, that is, a medium having the solids, including cells, removed. The Examiner has erred in interpreting steps B and C to be combined into one. It is clear that step C cannot be conducted without first obtaining the medium from step B. It is impossible to combine them for this reason. Merely separating the pellet with the cellular debris from the medium cannot be interpreted as "purifying the L-amino acid ***from the medium"***, as the medium is only obtained as a result of this separation.

Furthermore, Kobayashi teaches away from purifying L-amino acids from any

cell culture since the only description of a culture method describes manipulation of the post-centrifugation pellet, which does not contain the objective L-amino acids. Furthermore, "purifying" as defined in the specification on page 23, lines 2-7 clearly indicates a manipulative step such as "ion exchange, concentration and crystalline fraction methods..." is performed, which is not described or suggested by the Enzyme Assay of Kobayashi. This represents a further clear error in the interpretation of the claim, as the Examiner has refused to read the claims' terms in light of the specification. Although it is acknowledged that the purification methods decribed in the specification at page 23 cannot be imported into the claim, Applicant's definition cannot be completely ignored. The Examiner is completely ignoring this definition in the specification, as it clearly indicates that the claim must be interpreted to actually indicate a purification of the amino acid from the medium, not merely separating a medium from a pellet, as is taught by Kobayashi. Therefore, Kobayashi cannot anticipate the claimed invention.

A rejection was also made under 35 U.S.C. §103 over the same references, but further in view of Georgiou. This reference allegedly teaches a method of determining the growth phase of E. coli by measuring the optical density. To do this, one takes an aliquot during growth to take this measurment. The Examiner asserts that one would have been motivated to modify the method of Kobayashi to remove an aliquot of the culture for optical density measurement in order to determine when the cells reached mid-exponential growth phase. The Examiner then states that once the aliquot is taken, one would know to centrifuge the cells and prepare a cell extract of the harvested cells.

The clear error in the application of Georgiou is that there is still no teaching of purifying an amino acid from the aliquot or the medium after centrifugation. Therefore, this reference adds nothing to the rejection and fails to anticipate or render obvious the claimed invention.

Conclusion

In the interest of brevity, Applicant does not provide all arguments that would support an appeal for each of the pending and rejected claims. However, it is respectfully submitted that this case is in immediate and clear form for allowance based on the clear errors and omissions cited above. Accordingly, an early indication via a Notice of Allowability that all claims are allowable is respectfully requested. Should any questions arise in connection with this application or should the Examiner believe that a telephone conference with the undersigned would be helpful in resolving any remaining issues pertaining to this application, the undersigned respectfully requests that he be contacted at the number indicated below.

Respectfully submitted,

By: _____

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